MECHANICAL ENGINEERING B.S.



ACADEMIC ADVISING

Partnering with students to successfully navigate college

Location: Main Hall 208 **Phone:** 719.255.3260 **Website:** Academic Advising

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• Appointments: www.uccs.edu/advising/current-students
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GENERAL ACADEMIC INFORMATION

Minimum Graduation Requirements

- 127 credit hours
- 2.0 CU cumulative GPA
- Residency: Last 30 credit hours of degree must be completed while registered in the College Engineering & Applied Science at UCCS

Student Responsibilities

Students are required to know and follow:

- All academic policies set forth by the University, College, and academic department in the UCCS Catalog: <u>catalog.uccs.edu</u>
- All course prerequisites designated by the University. Failure to meet course prerequisites may result in an administrative drop of the course from a student's schedule. See degree audit for course prerequisites within the academic major.

DEGREE REQUIREMENTS

Explore Mechanical Engineering: Mechanical and Aerospace Engineering-Bachelor of Science in Mechanical Engineering | College of Engineering and Applied Science (uccs.edu)

	r	Major Requirements				
Mechanical Engineering Core Courses	Course/Area	Course Title	Credit Hours			
(60 hours)	MAE 1502 <i>or</i>	Principles of Mechanical Engineering <i>or</i>	3			
	MAE 1602	Principles of Aerospace Engineering				
A minimum GPA of 2.0 must be	MAE 1503	Intro to Engineering Design	3			
maintained on all MAE course work.	MAE 2055	Mech-Etronics I	4			
	MAE 2103	Statics	3			
You must be admitted into the College of	MAE 2104	Dynamics	3			
Engineering in order to take any MAE	MAE 2200	Materials Engineering	3			
coursework.	MAE 2301	Engineering Thermodynamics I	3			
	MAE 3005	Engineering Measurements Lab	3			
	MAE 3130	Fluid Mechanics	4			
	MAE 3201	Mechanics of Materials	3			
	MAE 3302	Engineering Thermodynamics II				
	MAE 3401	Modeling & Simulation of Dynamic Systems				
	MAE 3501	Machine Design I	3			
	MAE 4000	Mechanical and Aerospace Engineering Seminar				
	MAE 4020	Numerical Methods with MATLAB				
	MAE 4120	Machine Design II				
	MAE 4310	Heat Transfer	4			
	MAE 4421	Automatic Control of Aerospace & Mechanical Systems	3			
	MAE 4510 Engineering Design I (fall only)		2			
	MAE 4511	Engineering Design II (spring only)				
Taskwiss Flastings	Commiste 12 and dit	have of verse division (2000) level to be rived also time	12			
Technical Electives	Complete 12 credit hours of upper-division (3000+ level) technical electives. • 6 hours must be 4000-level					
(12 hours)	6 hours must be 4000-level 6 hours must be from MAE courses					
NOTE: MAE 3342 Engineering Economy	Courses from the following disciplines may be used for technical electives: Computer Science,					
can be counted as a business OR a	Electrical Engineering, Mechanical Engineering, Math (with at least MATH 1350 as a					
technical elective.	prerequisite), Physics (with at least PES 1110 or MATH 1350 as a prerequisite), PES 2130					
Computing Course	MAE 1090	Introduction to Structured Programming	3			
(3 hours)						
Business Courses	ENGR 3040	Engineering Ethics	3			
(6 hours)	Business Elective	Complete one course from the following:	3			
		BLAW 2000, MAE 3342, MKTG 3000, MGMT 3300				

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G	General Education and Elective F	Requirements					
Core Writing Requirement (6 hours)	ENGL 1310, 1308, or 1305 (Students choosing ENGL 1305 must complete ENGL 1300 first.) OR ENGL 1410 TCID 2090 Writing Portfolio – PORT 3000 (0 credits) or PORT 4000 (1 credit) or alternative – See Degree Audit						
Mathematics (18 hours)	MATH 1350 MATH 2350 MATH 3130 MATH 3400						
Basic Science (13 hours)	CHEM 1401/1402 PES 1110 PES 1120						
Compass Curriculum	Component	Course					
 (9 hours) Explore and Navigate courses must be taken in departments other than the major. Writing Intensive, Inclusiveness, and Sustainability courses may count toward other requirements within the degree. 	Gateway Program Seminar Explore – Arts, Humanities and Cultures Explore – Society, Behavior and Health Explore – Physical and Natural World Navigate Summit Writing Intensive Courses (WIC) Two courses with one upper-division (3000+ level) Inclusiveness	GPS 1010 (counts towards HUM/SS Electives) See Degree Audit (counts towards HUM/SS Electives) See Degree Audit (counts towards HUM/SS Electives) PES 1110 ENGR 3040 MAE 4511 MAE 3005 MAE 3130 MAE 1503					
	Sustainability	MAE 3302					

FOUR-YEAR DEGREE PLAN

Year One	1	FALL	Hours	1	SPRING	Hours
		MAE 1502	3		MAE 1503	3
		MATH 1350	4		MATH 1360	4
		GPS 1010	3		PES 1120	4
		ENGL 1310	3		CHEM 1401	4
>		PES 1110	4		CHEM 1402	1
		TOTAL	. 17		TOTAL	16
	J	FALL	Hours	1	SPRING	Hours
Year Two		MAE 1090	3		MAE 2104	3
		MAE 2103	3		MAE 2301	3
		MAE 2055	4		MATH 3130	3
		MAE 2200	3		MATH 3400	3
		MATH 2350	4		TCID 2090	3
		TOTAL	. 17		TOTAL	15
Year Three	J	FALL	Hours	/	SPRING	Hours
		MAE 3005	3		MAE 3130	4
		MAE 3201	3		MAE 3501	3
		MAE 3302	3		MAE 4421	3
		MAE 3401	3		Technical Elective	3
		MAE 4020	3		Explore – Society, Behavior, and Health course	3
					PORT 3000	0
		TOTAL	. 15		TOTAL	16
Year Four	J	FALL	Hours	/	SPRING	Hours
		MAE 4000	1		MAE 4511 (spring only)	3
		MAE 4120	3		Technical Elective	3
		MAE 4310	4		Technical Elective	3
		MAE 4510 (fall only)	2		Explore – Arts, Humanities & Cultures course	3
		Technical Elective	3		Business Elective	3
		ENGR 3040	3			
		TOTAL	. 16		TOTAL	15